IN THE CLAIMS:

Please add new claim 20 as follows:

1. (Previously Amended) An electric discharge laser apparatus including a tangential fan comprising:

A) a laser chamber comprising:

1) a laser gas,

2) at least two longitudinal electrodes for producing to electric discharges defining a discharge region in said gas,

3) a tangential fan for circulating said laser gas said fan defining a rotation axis and a circumference corresponding to a blade diameter of at least 5 inches, substantially concentric with said rotation axis and comprising a monolithic fan blade structure, said structure comprising:

a) a plurality of blade members, having non-uniform thickness and separated into at least 18 segments disposed in an approximate double helix pattern proximate to said circumference with the blade members in alternate segments being positioned approximately parallel to each other and at an acute angle with said rotation axis, said acute angle being approximately equal and opposite said acute angle of blade members in adjacent segments; and

b) a plurality of at least 17 hub members supporting said blade members and defining fan blade segments;

said blade members being positioned to minimize adverse effects in said discharge region of reflection of discharge generated acoustic shock waves from said blade members,

and said blade members and said hub members being machined as a monolithic unit from a single block of material,

B) a pulse power source for providing high voltage electrical pulses to said electrodes to produce electric discharges between said electrodes, at pulse rates of greater than 3,700 Hz, and

C) one or more fan motors driving said fan at speeds of 3500 rpm or greater.

2.(Original) The apparatus of claim 1, wherein the number of said blade members within each of a plurality of said segments is an odd integer.

3. (Original) The apparatus of claim 1, wherein said blade member has an airfoil cross-sectional shape.

4. (Original) The apparatus of claim 1, wherein said hub members are disposed substantially transversely relative to said rotation axis, wherein the number and axial placement of said hub members are selected such that the natural frequency of bending mode vibration of said tangential fan is controlled.

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5. (Original) The apparatus of claim 4, wherein said hub members are selected such that the natural frequency of bending mode vibration of said tangential fan is greater than twice the rotation frequency of said tangential fan.

6. (Original) The apparatus of claim 1, wherein the material of said tangential fan is an alloy selected from the group consisting of 6061 aluminum, an aluminum alloy containing additive metals consisting substantially of 3.5-6.5 per cent copper and 0-2.5 per cent nickel, and an aluminum alloy containing additive metals consisting substantially of 3.5-6.5 per cent copper and 0-1.5 per cent silver.

7. (Canceled) An apparatus as in Claim 1 wherein said blade members are positioned to simulate a double helix.

8. (Canceled) An apparatus as in Claim 7 wherein said plurality of hub members are more than 15 and less than 25.

9. (Original) An apparatus as in Claim 7 wherein said blade members have a cross section corresponding to an arc of an circle.

10. (Original) An apparatus as in Claim 7 wherein said circle is defined by a radius of less than 1.0 inch.

11. (Original) An apparatus as in Claim 1 wherein said blades are positioned within each segment of a plurality of said segments in an asymmetrical manner.

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12. (Original) An apparatus as in Claim 1 wherein said blade members in each of a plurality of said segment are positioned in an asymmetrical manner relative to blades in adjacent segments.

13. (Original) An apparatus as in Claim 1 wherein said blades within each segment are positioned so as to simulate a double helix configuration for the fan blade structure and the blades within each segment are also positioned in an asymmetrical manner.

14. (Original) An apparatus as in Claim 13 wherein blades in each of plurality of said segments are positioned in an asymmetrical manner relative to blades in adjacent segments.

15. (Original) An apparatus as in Claim 1 wherein said blade members have a cross section defined by a first circular arc with a first radius defining a convex blade member cylindrical surface and a second circular arc with a second radius defining a concave cylindrical surface.

16. (Original) An apparatus as in Claim 15 wherein said first radius is larger than said second radius and each of the two radii have a common straight line origin.

17. (Original) An apparatus as in Claim 15 wherein said second radius is larger than said first radius and said second radius has an origin farther away from said blade member than said corresponding origin of said first radius.

18. (Original) An apparatus as in Claim 17 wherein said blade elements comprises two cylindrical surfaces and a pointed leading edge.

19. (Original) An apparatus as in Claim 1 wherein all or substantially all of said blade members comprise two cylindrical surfaces and a pointed leading edge.

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20.(New) An electric discharge laser apparatus including a tangential fan comprising:

A) a laser chamber comprising:

1) a laser gas,

2) at least two longitudinal electrodes configured to produce electric discharges defining a discharge region in said gas,

3) a tangential fan for circulating said laser gas said fan defining a rotation axis and a circumference substantially concentric with said rotation axis and comprising a monolithic fan blade structure, said structure comprising:

a) a plurality of blade members disposed proximate to said circumference; and

b) a plurality of hub members supporting said blade members and defining fan blade segments;

c) said blade members being positioned in adjacent fan blade segments in a double helix pattern with the blades in sequential fan blade segments of the same helix pattern randomized to not be in helical alignment;

B) a pulse power source for providing high voltage electrical pulses to said electrodes to produce electric discharges between said electrodes.